



National Transportation Safety Board

Crash During Nonprecision Instrument Approach

Execuflight Hawker 700A
Akron, Ohio
November 10, 2015

Bill Tuccio, PhD
Cockpit Voice Recorder



Photo by Juan Carlos Photography

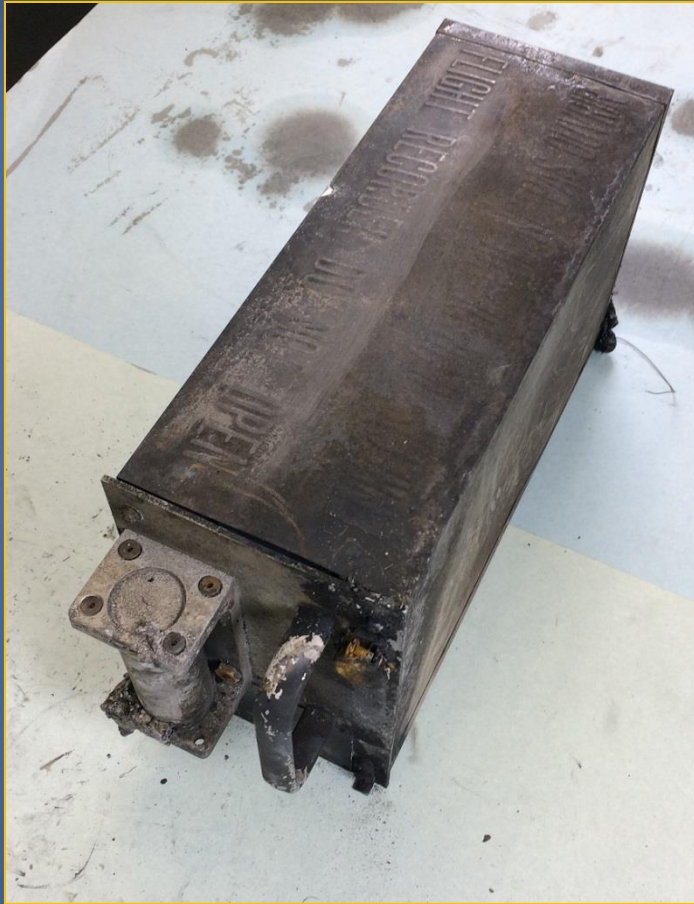
Flight Recorders

- Required to have 30-minute cockpit voice recorder (CVR)
- Not required to have flight data recorder

CVR History

- Tape-based Fairchild CVR manufactured April 1989
- Overhauled in accordance with CVR manufacturer's instructions
- CVR inspection on May 13, 2015

Sound Quality Issues



Postaccident Issue

- After accident, Execuflight determined another Hawker aircraft's CVR was inoperative
- Execuflight replaced it with overhauled CVR

Recommendation History

- August 2002: A-02-25
- Superseded March 2006: A-06-23
 - November 2014, “Closed-Acceptable”
 - Safety Alert for Operators (SAFO) 06019: *Functional Test of the Cockpit Voice Recorder (CVR) Prior to the First Flight of the Day*
 - Updated FAA Order 8900.1 with guidance to FAA maintenance inspectors

FAA Oversight

- Principal Operations Inspector
 - Not aware of SAFO 06019
 - No responsibility for CVR
- Principal Avionics Inspector
 - Ramp checked aircraft 4 months prior to accident (no power to aircraft, could not test CVR)
 - CVRs not tested with engines running

CVR Issues in Other Investigations

- Magnetic tape not properly erasing before writing new content
- Cockpit Area Microphones (CAMs) inoperative
- Inoperative CVRs
- Poor overall quality

Other NTSB Actions

- December 2015
 - Board commented on FAA draft advisory circular (AC) for CVRs
 - AC replaces last CVR AC issued by FAA November 1969
- July 22, 2016, FAA published AC 20-186
 - Incorporates many (but not all) of NTSB's comments
 - Not regulatory



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